

2. Check the shift drum for excessively worn or damaged cam grooves (A, **Figure 30**) or bearing surfaces (B). Replace the shift drum if necessary.

Shift Fork Inspection

Refer to **Table 5** when measuring the shift fork components in this section. Replace parts that are out of specification or damaged.

1. Inspect each shift fork (**Figure 31**) for signs of wear or damage. Examine the shift forks at the points where they contact the shifter gear (A, **Figure 32**). These surfaces must be smooth with no signs of wear, bending, cracks, heat discoloration or other damage.

2. Check each shift fork for arc-shaped wear or burn marks. These marks indicate that the shift fork has contacted the gear.

3. Check the shift fork shaft for bending or other damage. Install each shift fork on the shaft and slide it back and forth. Each shift fork should slide smoothly with no binding or tight spots. If all three shift forks bind on the shaft, check the shaft closely for bending. If only one shift fork binds on the shaft, check the shift fork closely.

4. Measure each shift fork leg thickness (**Figure 33**).

5. Measure the shift fork inside diameter (B, **Figure 32**) with a snap gauge. Then measure the snap gauge with a micrometer.

6. Measure the shift fork shaft outside diameter at three different points on the shaft.

Sub-gearshift Shaft Inspection

1. Inspect the sub-gearshift shaft and splines (A, **Figure 34**) for damage or bending.

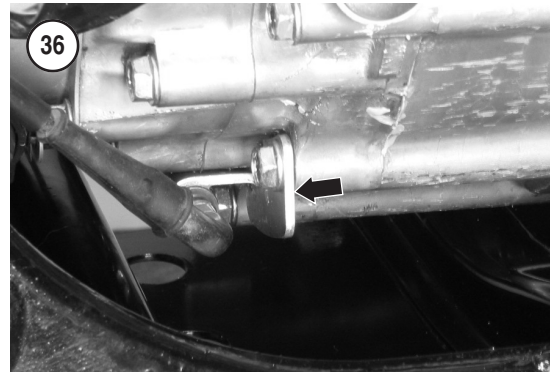
2. Inspect the arm (B, **Figure 34**) for excessive wear or damage.

REVERSE SELECTOR CABLE REPLACEMENT

1A. On models equipped with a combination meter, remove the meter cover (Chapter Fifteen).

1B. On models not equipped with a combination meter, remove the handlebar cover (Chapter Fifteen).

2. Remove the fuel tank as described in this chapter.



3. Make a diagram of the reverse selector cable routing path from the handlebar to the engine.
4. Remove any cable guides from the reverse selector cable.
5. Loosen the reverse selector cable locknut and loosen the adjuster (**Figure 35**) to obtain as much cable free play as possible.
6. Disconnect the reverse selector cable at the handlebar.
7. Remove the rear cover screw to detach the cable bracket (**Figure 36**) from the engine.
7. Disconnect the reverse selector cable from the selector arm on the engine.
8. Remove the reverse selector cable.
9. Reverse the preceding steps to install the reverse selector cable, plus the following:
 - a. Tighten the engine cover bracket screw to 12 N•m (106 in.-lb.).
 - b. Lubricate the new cable as described in Chapter Three.
 - c. Adjust the reverse selector cable as described in Chapter Three.

Table 1 TRANSMISSION GENERAL SPECIFICATIONS

Transmission	Constant mesh, five-speeds and reverse
Shift pattern	R-N-1-2-3-4-5
Primary reduction ratio	2.188 (70/32)
Secondary reduction ratio	1.933 (29/15)
Final reduction ratio	
Front (FE/FM)	3.769 (49/13)
Rear	3.692 (48/13)
Gear ratios	
First gear (slow)	3.455 (38/11)
Second gear	1.933 (29/15)
Third	1.333 (28/21)
Fourth	0.966 (28/29)
Fifth	0.720 (18/25)
Reverse	4.600 (39/13 × 23/15)

Table 2 MAINSHAFT SERVICE SPECIFICATIONS

	New mm (in.)	Service limit mm (in.)
Gear inside diameter		
Fourth gear	23.000-23.021 (0.9055-0.9063)	23.04 (0.907)
Fifth gear	18.000-18.021 (0.7087-0.7095)	18.05 (0.711)
Mainshaft outside diameter		
Fourth gear	19.959-19.980 (0.7858-0.7866)	19.93 (0.785)
Fifth gear	14.966-14.984 (0.5892-0.5899)	14.94 (0.588)
Gear bushings		
Fourth gear		
Inside diameter	20.000-20.021 (0.7874-0.7882)	20.04 (0.789)
Outside diameter	22.959-22.979 (0.9039-0.9047)	22.94 (0.903)
Fifth gear		
Inside diameter	15.000-15.018 (0.5906-0.5913)	15.04 (0.592)
Outside diameter	17.959-17.980 (0.7070-0.7079)	17.94 (0.706)
Gear-to-bushing clearance		
Fourth gear	0.021-0.062 (0.0008-0.0024)	0.10 (0.004)
Fifth gear	0.020-0.062 (0.0008-0.0024)	0.10 (0.004)
Bushing-to-shaft clearance		
Fourth gear	0.020-0.062 (0.0008-0.0024)	0.10 (0.004)
Fifth gear	0.016-0.052 (0.0006-0.0020)	0.10 (0.004)

Table 3 COUNTERSHAFT SERVICE SPECIFICATIONS

	New mm (in.)	Service limit mm (in.)
Gear inside diameter (all gears)	25.000-25.021 (0.9843-0.9851)	25.05 (0.986)
Gear bushing outside diameter	24.959-24.980 (0.9826-0.9835)	24.93 (0.981)
Gear-to-bushing clearance	0.020-0.062 (0.0008-0.0024)	0.10 (0.004)

Table 4 REVERSE IDLE GEAR SERVICE SPECIFICATIONS

	New mm (in.)	Service limit mm (in.)
Reverse idle gear shaft		
outside diameter	12.966-12.984 (0.5105-0.5112)	12.94 (0.509)
Gear inside diameter	13.000-13.018 (0.5118-0.5125)	13.04 (0.513)
Gear-to-shaft clearance	0.016-0.052 (0.0006-0.0020)	0.10 (0.004)

Table 5 SHIFT FORK SERVICE SPECIFICATIONS

	New mm (in.)	Service limit mm (in.)
Shift fork leg thickness	4.93-5.00 (0.194-0.197)	4.50 (0.177)
Shift fork inside diameter	13.000-13.018 (0.5118-0.5125)	13.04 (0.513)
Shift fork shaft outside diameter	12.966-12.984 (0.5105-0.5112)	12.96 (0.510)

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